CUMULATIVE INDEX 1996

Volume 76

February	COST EFFECTIVENESS IN SURGERY, pages 1–204
April	SPECIAL PROBLEMS IN BREAST CANCER THERAPY, pages 205–435
June	LAPAROSCOPIC SURGERY, pages 437–644
August	COMPLEX AND CHALLENGING PROBLEMS IN TRAUMA SURGERY, pages 645–1007
October	SURGICAL MANAGEMENT OF GASTROINTESTINAL FISTULAS, pages 1009–1203
December	CUTANEOUS MALIGNANT MELANOMA, pages 1205–1466

Note: Page numbers of article titles are in **boldface** type.

Abdominal aorta injuries. See *Abdominal vascular injuries.*
Abdominal compartment syndrome, **833–842**
  and oliguria, 978
  diagnosis of, 836–838
  etiology of, 836
  historical aspects of, 833–834
  management of, 838–840
  morbidity and mortality from, 840–841
  pathophysiology of, 834–836
    cardiovascular, 834
    pulmonary, 834–835
    renal, 835
Abdominal decompression, for abdominal compartment syndrome, 838–840
Abdominal injuries, with severe burns, 936–938
Abdominal vascular injuries, **813–832**
  abdominal aorta and iliac arteries, 815–817
    anatomy in, 816–817
    patterns of injury, 815–816
  celiac truck and branches, 825–826
    anatomy in, 825
    exposure and repair, 825–826
    patterns of injury, 825
  general surgical principles for, 814–815, 829–830
  substitute conduit of choice in, 830
  superior mesenteric circulation, 826–828
    anatomy in, 826
    exposure and repair, 826–828
    patterns of injury, 826
  superior mesenteric vein and portal vein, 828–829
    anatomy in, 828
    exposure and repair, 828–829
    patterns of injury, 828
  vena cava and iliac veins, 817–825
    anatomy in, 817
    exposure and repair, 817–818, 821–822, 824–825
    patterns of injury, 817
Abdominal wall infections, with gastrointestinal fistulas, 1113–1115
Abortion, therapeutic, for breast cancer, in pregnancy, 273–274
Abscesses, bile, in nonoperative management, of complex hepatic injuries, 770
  intra-abdominal, with gastrointestinal fistulas, 1113
  pancreatic, complex pancreatic injuries and, 793
Abscessograms, in interventional radiology, for gastrointestinal fistulas, 1084
Achalasia, laparoscopic surgery for. See *Cardiomyotomy.*
Acquired melanocytic nevi, as precursor to malignant melanoma, 1290

Acral lentiginous melanoma, dermatologic perspective on, 1293
pathology of, 1230
Acute acalculous cholecystitis, management of, 499
Adnexal disease, mimicking appendicitis, laparoscopic surgery for, 474–475
Adrenal carcinoma, as contraindication to laparoscopic adrenalectomy, 533
Adrenalectomy, laparoscopic, **523–537**
contraindications to, 533–534
postoperative care for, 533
results of, 534–536
techniques for, 523–533
bilateral adrenalectomy, 531, 533
left adrenalectomy, 523–528
right adrenalectomy, 528–529, 531
Air emboli, after thoracotomy, for complex thoracic injuries, 739
Airway, establishment of, in severe burns, 926–927
Alcohol-related traumatic injuries, prevention of, cost effectiveness of, 57
Amino acids, in neurologic injuries, 910–911, 918
21-Aminosteroids, in neurologic injuries, 918
Amputations, for severe open fractures, 890–891
perfusion chemotherapy and, for malignant melanoma, 1327
Androgen receptor, in inherited breast cancer, 213
Anesthesia, cost effectiveness of, in breast cancer surgery, 29
in inguinal hernia repair, 106–107
in laparoscopic cholecystectomy, 121–122
in laparoscopic surgery, for trauma, 552–553
Angelchik prosthesis, for gastroesophageal reflux, 447
Angiography, cost effectiveness of, for bleeding peptic ulcers, 95
for distal biliary obstruction, 69
in trauma care, 52
in laparoscopic surgery, for pancreatic malignancies, 558
of aortoenteric fistulas, 1151
of penetrating neck trauma, 662
vs. color flow Doppler imaging, 663
Angiosarcoma, of breast, 386–387, 389
Anterior external fixation, for pelvic ring disruption, 886–887
Anterolateral thoracotomy, for penetrating cardiac injuries, 708
Anthropometric indices, and risk of malignant melanoma, 1214–1215
Antibiotics, in laparoscopic herniorrhaphy, cost effectiveness of, 110–111
prophylactic, for severe burns, 946–947
for severe open fractures, 891
Antireflux surgery, laparoscopic, **437–450**
Angelchik prosthesis, 447
contraindications to, 439
for failed antireflux surgery, 447
for paraesophageal hernias, 447
future of, 447–448
Hill fundoplication, 446–447
historical aspects of, 437
indications for, 438
Nissen fundoplication, 439–445
intraoperative complications of, 443, 445
postoperative care for, 443
postoperative complications of, 445
preoperative evaluation for, 439–440
results of, 443
technique for, 440–443
preoperative evaluation for, 438–439
Toupet fundoplication, 445–446
training for, 448
with laparoscopic cardiomyotomy, for achalasia, 453–454
Aortic graft, bacterial infections of, 1149
Aortoenteric fistulas, **1147–1157**
classification and pathophysiology of, 1014–1016
clinical features of, 1149
diagnosis of, 1150–1151
incidence of, 1148
operative management of, 1151–1154
pathogenesis of, 1148
prevention of, 1154–1155
Aortoesophageal fistulas. See *Esophageal fistulas.*
APACHE score, of severity of illness, in intensive care unit, 176–177
Apoptosis, in neurologic injuries, 911
Appendectomy, laparoscopic, 469–472
results of, 470–472
technique for, 470
Appendiceal fistulas, pathophysiology of, 1014
Appendicitis, cost-effective management of, **71–82**
1993 California data on, 74–78
1993 California military medical center data on, 78–80
data collection in, 73
definition of acute abdomen in, 72
historical aspects of, 71–72
Tucson Medical Center data on, 80–81
Arterial bleeding, in pelvic ring disruption, 894–895
Arterial injuries, peripheral. See *Difficult peripheral vascular injuries.*
Arteriography, of penetrating thoracic vascular injuries, 752
Ascitic cirrhosis, and abdominal compartment syndrome, 836

Aspiration biopsies, of atypical hyperplasia, in breast cancer, 226
Ataxia-telangiectasia, inherited breast cancer in, 212–213
Atrial injuries, traumatic, 710
Atriocaval shunts, for complex hepatic injuries, 778–779
Autogenous materials, to repair penetrating cardiac injuries, 711
Autogenous vein grafts, for arterial injuries, 847–848
Autoregulation, loss of, in neurologic injuries, 906–907
Axillary artery injuries, traumatic, 848
Axillary node dissections, for malignant melanoma, 1306–1307

Bacille Calmette-Guérin, for malignant melanoma, 1359–1360
for node-negative breast cancer, 329–330
Bacterial infections, of aortic graft, 1149
Barium studies, in interventional radiology, for gastrointestinal fistulas, 1084
of gastrointestinal fistulas, 1082
Barotrauma, in trauma surgery, 972
Base deficit, in trauma surgery, 961
BHD regimen of chemotherapy, for malignant melanoma, 1346
Bile abscesses, in nonoperative management, of complex hepatic injuries, 770
Bile duct injuries. See *Common bile duct injuries.*
Biliary disease, laparoscopic cholecystectomy for. See *Cholecystectomy.*
Biliary duct disruption, in nonoperative management, of complex hepatic injuries, 770–771
Biliary obstruction. See *Malignant obstructive jaundice.*
Biliary tree, carcinoma of, laparoscopic surgery for, 562–564
Biochemotherapy, for malignant melanoma, 1347–1348
Bioimpedance, to estimate cardiac output, in shock, 991
to measure circulation, in shock, 989
Biologic therapy, with chemotherapy, for malignant melanoma, 1347–1348
Bioprosthetic materials, to repair penetrating cardiac injuries, 711
Biopsies, fine-needle aspiration, of breast cancer, in men, 347
in pregnancy, 269
full-thickness nipple, of Paget's disease, of nipple-areola complex, 368
of atypical hyperplasia, in breast cancer, 226–227
of suspected malignant melanoma, 1294
sentinel node, for malignant melanoma, 1301–1304
Bladder injuries, with pelvic fractures, 873–874
Bladder pressure, in abdominal compartment syndrome, 837
Bleeding, gastrointestinal, with aortoenteric fistulas, 1149
in peptic ulcer. See *Peptic ulcer bleeding.*
laparoscopic cardiomyotomy and, 454–455
laparoscopic Nissen fundoplication and, 443
management of, in difficult laparoscopic surgery, 609–611
upper gastrointestinal, control of, EndoLap in, 598
Blood chemistries, in trauma care, cost effectiveness of, 52
preoperative, cost effectiveness of, 20
Blood pressure, maintenance of, in shock, 653
Blood transfusions, for bleeding peptic ulcers, cost effectiveness of, 96
Blunt trauma, laparoscopic surgery for, 549–551
Bogota bag, for abdominal compartment syndrome, 839–840
BOLD regimen of chemotherapy, for malignant melanoma, 1346, 1348
Bone marrow rescue, with chemotherapy, for inflammatory breast cancer, 425
Bone marrow transplantation, with high-dose chemotherapy, for malignant melanoma, 1345–1346
Bone scans, of breast cancer, in pregnancy, 270
Bones, metastases to, from malignant melanoma, radiation therapy for, 1393
Book thoracotomy, for penetrating cardiac injuries, 708
Bowel resection, EndoLap in, 602
Bowen's disease, vs. Paget's disease, of nipple-areola complex, 371
Brachial artery injuries, traumatic, 849
Brachiocephalic venous injuries, penetrating, 756
Brain, in shock, 655–656
metastases to, from malignant melanoma, imaging of, 1401–1402
radiation therapy for, 1392–1393
signs and symptoms of, 1400–1401
stereotactic radiosurgery for. See *Stereotactic radiosurgery.*
Brain extirpation, for complex neurologic injuries, 917
Brain injury, traumatic, cost-effective management of, 54

Brain injury *(Continued)*
prevention of, cost effectiveness of, 56
BRCA1 gene, in inherited breast cancer, 208–209, 233
predictive testing for, 214–216
BRCA2 gene, in inherited breast cancer, 210, 233
in men, 345
predictive testing for, 214, 216
BRCA3 gene, in inherited breast cancer, 213
Breast cancer, breast reconstruction for. See *Breast reconstruction.*
cost-effective management of, **25–34**
operative strategies in, 29–32
adjuvant therapy, 30–32
postoperative strategies in, 32–33
preoperative strategies in, 26–28
ductal carcinoma in situ. See *Ductal carcinoma in situ.*
high risk of, **221–230**
atypical hyperplasia, 226–227
definition of, 221–222
management and counseling of, 227–228
molecular and cellular markers of, 227
proliferative disease, 222–226
family history in, 225
greatly increased risk, carcinoma in situ, 225–226
high risk, non-carcinoma in situ lesions, 224–225
slightly increased risk, 223–224
in elderly women. See *Elderly women.*
in men. See *Men.*
in pregnancy. See *Pregnancy.*
in young women. See *Young women.*
inflammatory. See *Inflammatory breast cancer.*
inherited. See *Inherited breast cancer.*
locally advanced noninflammatory. See *Locally advanced noninflammatory breast cancer.*
node-negative. See *Node-negative breast cancer.*
Paget's disease. See *Paget's disease.*
prophylactic mastectomy for. See *Prophylactic mastectomy.*
sarcoma. See *Sarcoma.*
Breast reconstruction, after breast cancer, **309–326**
autogenous, 315–323
bipedicled transversus abdominis myocutaneous flap in, 3198
free transversus abdominis myocutaneous flap in, 3198
gluteal flaps in, 323
latissimus dorsi myocutaneous flap in, 319, 321
single-pedicle transversus abdominis myocutaneous flap in, 318–319
transversus abdominis myocutaneous flap in, 316–318
delayed, 311
immediate, 310–311
nipple-areola complex reconstruction in, 323–324
saline implants in, 314
silicone implants in, 312–314
Breathing, maintenance of, in severe burns, 927–928
Bronchoalveolar lavage, for pneumonia, with severe burns, 947
Bronchopleural fistulas, after thoracotomy, for complex thoracic injuries, 740–741
Bronchoscopy, of tracheobronchial injuries, 728
Burns, severe. See *Severe burns.*
Buserelin, for metastatic breast cancer, in men, 354

Calcium, metabolism of, in neurologic injuries, 910
Calorie requirements, in nutritional support, for gastrointestinal fistulas, 1062–1065
Calorie-to-nitrogen ratio, in nutritional support, for gastrointestinal fistulas, 1054
Cancer, breast. See *Breast cancer.*
colorectal. See *Colorectal cancer.*
ovarian, mimicking appendicitis, laparoscopic surgery for, 477–478
Carcinoembryonic antigen, monitoring of, in colorectal cancer, cost effectiveness of, 42
Carcinoma, adrenal, as contraindication to laparoscopic adrenalectomy, 533
gallbladder, cholelithiasis and, 496–497
laparoscopic surgery for, 562–564
Carcinoma in situ, ductal. See *Ductal carcinoma in situ.*
lobular. See *Lobular carcinoma in situ.*
Cardiac arrhythmias, after thoracotomy, for complex thoracic injuries, 740
Cardiac injuries, penetrating. See *Penetrating cardiac injuries.*
Cardiac output, estimations of, in shock, 991
Cardiomyotomy, laparoscopic, for achalasia, **451–458**
complications of, 454–455
postoperative care for, 454–455
preoperative evaluation for, 451–452
results of, 455–456
technique for, 452–454

Cardiovascular disease, chemotherapy and, for breast cancer, in young women, 283
Cardiovascular system, in abdominal compartment syndrome, 834
Carotid injuries, traumatic. See *Penetrating neck trauma.*
Cathepsin D, and chemotherapy, for node-negative breast cancer, 338–340
Celiac trunk injuries. See *Abdominal vascular injuries.*
Cellular markers, of risk, in breast cancer, 227
Central venous access, in nutritional support, for gastrointestinal fistulas. See *Nutritional support.*
c-*erb*B2 oncogene, and chemotherapy, for node-negative breast cancer, 337–338
  in ductal carcinoma in situ, 250, 251
    with Paget's disease, of nipple-areola complex, 372
Cerebrospinal fluid pressure, in neurologic injuries, 908–909
Cervical esophagostomy, for esophageal injuries, 732
Cervical fistulas, etiology of, 1022, 1023
Cervical spine radiographs, in trauma care, cost effectiveness of, 51–52
Cheeks, malignant melanoma of, plastic surgery for, 1335
Chemoimmunotherapy, for malignant melanoma, 1347–1348
Chemoprevention, of inherited breast cancer, 217
Chemotherapy, and breast reconstruction, after breast cancer, 310–311
  for advanced breast cancer, in elderly women, 301–302
  for breast cancer, cost effectiveness of, 28
    in pregnancy, 274–275
    in young women, 283
  for breast sarcoma, 388
  for early-stage breast cancer, in elderly women, 300–301
  for inflammatory breast cancer, 420–425
  for localized breast cancer, in men, 352
  for locally advanced noninflammatory breast cancer, 399–400, 402–404
    breast conservation in, 404–407
  for malignant esophagorespiratory fistulas, 1127
  for malignant melanoma. See *Malignant melanoma, medical management of.*
  for metastatic breast cancer, in men, 354
  for node-negative breast cancer. See *Node-negative breast cancer.*
  perfusion. See *Perfusion chemotherapy.*
  with bone marrow rescue, for inflammatory breast cancer, 425
  with cytokines, for malignant melanoma, 1369–1370
Chest radiographs, preoperative, cost effectiveness of, 15, 17
Chlorambucil, with Leukeran, methotrexate, and fluorouracil, for node-negative breast cancer, 329–330
Cholangiography, cost effectiveness of, for proximal biliary obstruction, 65
  in laparoscopic cholecystectomy, 122–123
Cholecystectomy, laparoscopic, **493–504**
  for asymptomatic patients, 494–498
    decision analysis in, 494–496
    natural history of, 494
    with diabetes mellitus, 497–498
    with gallbladder cancer, 496–497
    with organ transplantation, 498
  for gallbladder disease. See *Gallbladder disease.*
  for patients without stones, 499–500
    with acute acalculous cholecystitis, 499
    with chronic acalculous cholecystitis, 500
    with HIV-associated biliary disease, 499
    with sludge pancreatitis, 500
  reporting results of, **623–630**
    state-wide registry in, 624–628
      barriers to participation in, 624–625
      design and implementation of, 627
      preliminary findings of, 627–628
      rationale for, 625–627
Chronic acalculous cholecystitis, management of, 500
Chronic obstructive pulmonary disease, nutritional support in, calorie requirements in, 1064
Circulation, maintenance of, in severe burns, 928–930
Cirrhosis, ascitic, and abdominal compartment syndrome, 836
Cisplatin, for malignant melanoma, 1346, 1347, 1370
Clark level, of malignant melanoma, 1242–1243
Clinging carcinoma, in proliferative breast disease, 225–226
Clotting factors, transudation of, in severe burns, 942
Coagulation studies, preoperative, cost effectiveness of, 20
Coagulopathy, as contraindication to laparoscopic adrenalectomy, 533
  complicating transcerebral missile injuries, 920
Colocutaneous fistulas, etiology and recognition of, 1029–1030

Colocutaneous fistulas *(Continued)*
management of, 1185, 1187
pathophysiology of, 1014
symptoms and signs of, 1183–1184
Colon resection, laparoscopic, **571–583**
future of, 581–582
indications for, 571–572
physiologic alterations due to, 576, 578
rectosigmoid resections, 576
results of, 579–581
adequacy of resection and treatment for carcinoma, 580–581
conversion rate, 579
duration of operation, 579
hospital costs, 580
length of hospitalization, 580
morbidity and mortality, 579
palliative treatment for malignancy, 581
postoperative pain, 580
technique for, 572–576
training for, 571
trocar port positioning for, 572
Colonic fistulas, 1029–1030, **1183–1190**
correction of fluid and electrolyte imbalances in, 1030
diagnosis of, 1184–1185
etiology and recognition of, 1029–1030
management of, 1185, 1187
colocutaneous fistulas, 1185, 1187
colovesical fistulas, 1187–1188
radiation-induced fistulas, 1189
stabilization of, 1030
symptoms and signs of, 1183–1184
Colonic tumors, localization of, EndoLap in, 598
Color flow Doppler imaging, of penetrating neck trauma, vs. angiography, 663
Colorectal cancer, cost-effective management of, **35–45**
carcinoembryonic antigen screening in, 42
curative therapy for recurrent cancer, 39–40
meta-analysis in, 41–43
potential solutions in, 40
prospective randomized follow-up in, 43–44
screening in, modalities for, 37–38
rules of evidence in, 35–39
time trend analysis in, 40–41
Colorectal carcinoma, laparoscopic surgery for, 564–566
Colostomy, for colonic fistulas, 1187
Colovaginal fistulas, symptoms and signs of, 1184
Colovesical fistulas, etiology and recognition of, 1029–1030
management of, 1187–1188
Coma, as prognostic factor, in carotid injuries, 668–669
Common bile duct injuries, laparoscopic surgery for, **505–513**
bile duct leaks, 505–506
major ductal disruptions, 509–512
minor ductal injuries, 506, 509
Common bile duct stones, cost-effective management of, 123
Compartment syndromes, in severe burns, 931–932
peripheral vascular injuries and, 855–857
Complex duodenal injuries, **797–812**
anatomy in, 797–798
definition of, 801–802
diagnosis of, 799–801
duodenal exclusion procedures for, 805, 807–808
incidence of, 798–799
morbidity and mortality from, 809–810
pancreaticoduodenal injuries, 809
pancreaticoduodenectomy for, 808–809
pedicled mucosal grafts for, 805
resection and end-to-end anastomosis for, 804–805
serosal patch for, 805
tube decompression for, 803
Complex hepatic injuries, **763–782**
atriocaval shunts for, 778–779
blunt, nonoperative management of, 766–772
criteria for, 766–767
future of, 771–772
injury scale score and, 767–768
pitfalls of, 768–771
bile collections and abscesses, 770
biliary duct disruption and strictures, 770–771
hemorrhage, 769–770
missed intra-abdominal injuries, 768
resuming normal activities after, 771
diagnosis of, 765–766
drainage for, 779
emergency department assessment of, 764–765
injury scale score for, 763–764
intrahepatic hemostasis for, 774–775
penetrating, nonoperative management of, 772
perihepatic packing for, 777
Pringle maneuver for, 773–774
resectional débridement with vascular ligation/resection for, 776–777
viable omental pack for, 775–776
Complex neurologic injuries, **905–922**
aspects of, 906–909
edema, 907–908
herniation, 908

hyperemia, 907
increased cerebrospinal fluid pressure, 908–909
increased intracranial pressure, 908
ischemia, 909
loss of autoregulation, 906–907
physical, 906
vascular, 906
brain extirpation for, 917
definition of, 905–906
diagnosis of, 911–912
diuresis for, 917
elimination of reversible injurious forces in, 914–915
head position in, 916
hyperventilation for, 916
intracranial pressure management in, 916
monitoring of, 912–913
prehospital care for, 914
protection from, 917–918
substrate supply and delivery in, 915–916
toxic/metabolic changes in, 909–911
apoptosis, 911
electrolytes, 909–911
glucose, 909
oxygen, 909
with non-neurologic injuries, 919–920
Complex orthopedic injuries, **879–903**
distal femur fractures, 893–894
femoral shaft fractures, 898
high-energy pelvic ring disruptions, 880–888
anatomic reduction of, 886
anterior internal fixation for, 886–887
arterial bleeding in, 884–885
diagnosis of, 882
early management of, 882
early mobilization after, 887
massive hemorrhage in, 881
posterior internal fixation for, 887
reduction of, 882–884
sacroiliac dislocations, 887
venous bleeding in, 885–886
severe open fractures, 888–893
antibiotics for, 891
classification of, 889–890
free tissue grafts for, 891–892
initial management of, 888
necessity of amputation for, 890–891
soft tissue evaluation in, 888
tibial plateau fractures, 894–898
radiologic evaluation of, 896
Complex pancreatic injuries, **783–795**
adjunctive measures for, 792
choice of drain for, 788
complications of, 792–793
diagnosis of, 784–787
distal transection/parenchymal injuries, with ductal injuries, 788–789
grading of, 784
massive disruption of head, with pancreaticoduodenal injuries, 791–792
proximal transection/contusion, with ductal injuries, 789–791
Complex thoracic injuries, **725–748**
esophageal injuries, 726–727, 730–731
delayed recognition of, 731–735
early recognition of, 731
extra-anatomic air in, 725–726
pleural fluid collections after, 742–746
empyema, 744–746
retained hemothorax, 743–744
pneumomediastinum and pneumopericardium, 729–730
pulmonary resection after, 735
tracheobronchial injuries, 727–728
urgent thoracotomy for, 735–742
morbidity and mortality from, 739–741
patient evaluation for, 736–738
postoperative care for, 741–742
technique for, 738–739
Complex urologic injuries, **861–878**
penile amputation, 876
renal injuries, 861–872
in children, 868
operative management of staged patient, 863–866
operative management of unstaged patient, 866–868
radiologic evaluation of, 861–863
renal exploration for, 868
renal pedicle injuries, 870–871
ureteral injuries, 871–872
with pancreatic injuries, 869–870
with pelvic fractures, 873–876
bladder injuries, 873–874
posterior urethral disruption, 874–876
Computed tomography, cost effectiveness of, for distal biliary obstruction, 69
in trauma care, 52
in laparoscopic surgery, for pancreatic malignancies, 558
for trauma, 548–552
of aortoenteric fistulas, 1150–1151
of complex duodenal injuries, 799
of complex hepatic injuries, 766–770
of complex neurologic injuries, vs. plain films, 912
of complex pancreatic injuries, 786
of enterocutaneous fistulas, 1010
of gastrointestinal fistulas, 1082–1083
of metastatic disease, from malignant melanoma, 1401
of pelvic ring disruption, 886
of pleural fluid collections, after complex thoracic injuries, 742, 743, 745, 746
of renal injuries, 862–863

Computed tomography *(Continued)*
of severe burns, 937
Congenital melanocytic nevi, as precursor to malignant melanoma, 1289–1290
Congestive heart failure, nutritional support in, calorie requirements in, 1064–1065
Connective-tissue disorders, saline breast implants and, 314
Coronary artery injuries, traumatic, 710–711
Cost effectiveness, of surgery, for appendicitis. See *Appendicitis.*
for breast cancer. See *Breast cancer.*
for colorectal cancer. See *Colorectal cancer.*
for gallbladder disease. See *Gallbladder disease.*
for inguinal hernia. See *Inguinal hernia.*
for malignant obstructive jaundice. See *Malignant obstructive jaundice.*
for peptic ulcer bleeding. See *Peptic ulcer bleeding.*
for trauma. See *Trauma care.*
how to increase, **161–173**
automation in, 162
case preparation in, 166–167
facility design in, 167–168
human resources in, 168–169
materials management in, 163–166
Rex Same Day Surgery experience in, 169–172
scheduling in, 162–163
intensive care factors in, **175–200**
administrative, 184–185
admission criteria, 179–180
clinical information systems, 196–197
continuous quality improvement, 185–188
data-driven outcome assessment, 191–193
direct vs. indirect costs, 183–184
education, 182–183
futility of care, 180–181
generic goals of intensive care, 178–179
prediction and resource utilization, 181–182
severity of illness, 176–178
technology, 193–196
time and personnel requirements, 188, 190–191
mass screening in. See *Mass screening.*
quality assurance in, **139–159**
American College of Surgeons in, 147
commercial private sector entities in, 147–148
continuous quality improvement and total quality management, 142
future directions in, 151, 153, 155–156
HEDIS report cards, 153
physician profiles, 153
physician profiling/report cards, 151
severity adjustment, 155–156
state government initiatives, 153, 155
Health Care Financing Administration in, 144, 146–147
historical aspects of, 139–142
JCAHO in, 143–144
Lahey-Hitchcock Clinic experience in, 148–151
clinical pathways, 150–151
integrated quality improvement plan, 148, 150
technologic factors in, **129–138**
examples of value and outcome assessment, 130–131
true advance vs. gimmick, 131–134
Cowden's disease, inherited breast cancer in, 211
Cricothyroidotomy, to establish airway, in severe burns, 927
Crohn's disease, and small bowel fistulas, 1013–1014
CT cystogram, of pelvic fractures, 873
Cutaneous melanoma, radiation therapy for, 1386
CVD regimen of chemotherapy, for malignant melanoma, 1347
Cyclophosphamide, for node-negative breast cancer, 329
with methotrexate and fluorouracil, 328–329
Cyproterone acetate, for metastatic breast cancer, in men, 354
Cystosarcoma phyllodes, of breast, 384–385, 389–390
Cystoscopy, of colonic fistulas, 1184
Cysts, ruptured ovarian, mimicking appendicitis, laparoscopic surgery for, 474–475
Cytogenetic abnormalities, in malignant melanoma, **1257–1271**
and clinical outcome, 1264–1265
chromosome 1, 1265–1266
chromosome 6, 1266
chromosome 7, 1266–1267
chromosome 9, 1267
chromosome 10, 1267–1268
karyotypes in, 1259–1261
solid tumors, 1258–1259
statistical issues in, 1261, 1263–1264
Cytokines, for malignant melanoma, 1364–1368

with chemotherapy, for malignant melanoma, 1347, 1369–1370

Dacarbazine, for malignant melanoma, 1344, 1348, 1369–1370
Dartmouth regimen of chemotherapy, for malignant melanoma, 1347, 1348
Deep venous thrombosis, prevention of, in severe burns, 948–949
Desferoxamine, for severe burns, 942
Desmoplastic malignant melanoma, pathology of, 1239, 1242
Diabetes mellitus, cholelithiasis with, 497–498
  nutritional support in, calorie requirements in, 1064
Diagnostic peritoneal lavage, in complex hepatic injuries, 765
  in laparoscopic surgery, for trauma, 548–552
  in severe burns, 937
Diet, and risk of malignant melanoma, 1217–1218
Difficult peripheral vascular injuries, **843–859**
  arterial injuries, 845–854
    brachial, radial, and ulnar artery injuries, 849
    embolization for, 846
    external iliac/femoral artery injuries, 849–850
    in children, 854
    intra-arterial drug injections and, 853–854
    nonoperative management of, 845–846
    operative management of, 846–848
    popliteal artery injuries, 851–852
    subclavian/axillary artery injuries, 848
    tibial artery injuries, 852
  compartment syndrome, 855–857
  diagnosis of, 844–845
  mechanism of injury in, 843–844
  orthopedic, soft tissue, and nerve injuries, 855
  venous injuries, 854
Distal biliary obstruction, cost-effective management of, 67–70
Distal femur fractures, traumatic, 893–894
Distal pancreatectomy, for complex pancreatic injuries, 788–789
Distal systolic Doppler pressure, in peripheral vascular injuries, 844
Diuresis, for complex neurologic injuries, 917
DNA/S phase, of cell cycle, and chemotherapy, for node-negative breast cancer, 337
Doppler imaging, of penetrating neck trauma, vs. angiography, 663
Doppler pressure, distal systolic, in peripheral vascular injuries, 844
Doppler ultrasonography, transcranial, of complex neurologic injuries, 913
Dor fundoplication, with laparoscopic cardiomyotomy, for achalasia, 453–454
Dressings, in skin care, for gastrointestinal fistulas, 1100
Drug injections, intra-arterial, and arterial injuries, 853–854
Ductal carcinoma in situ, **243–265**
  and risk of invasive breast cancer, 234–235
  biologic markers of, 250–251
  grading of, 249–250
  history and epidemiology of, 244–245
  in proliferative breast disease, 225–226
  mammographic findings in, 253–255
  microscopic patterns in, 245–249
    comedo, 245
    noncomedo cribriform and micropapillary, 246
    Paget's disease of nipple, 249
    papillary, 248–249
    solid, 246, 248
  pathology of, 245
  presentation of, 252
  treatment of, 255, 257–261
    lumpectomy with radiation therapy in, 255, 257, 261
    mastectomy in, 257
    radiation therapy in, 257, 260–261
  with Paget's disease, of nipple-areola complex, 372, 375–376
Duodenal diversion procedures, for complex pancreatic injuries, 790–791
Duodenal exclusion procedures, for complex duodenal injuries, 805, 807–808
Duodenal fistulas. See *Gastroduodenal fistulas.*
Duodenal injuries, complex. See *Complex duodenal injuries.*
Dysgerminomas, mimicking appendicitis, laparoscopic surgery for, 477–478
Dysphagia, laparoscopic Nissen fundoplication and, 445
Dysplastic nevi, as precursor to malignant melanoma, 1290–1291
  pathology of, 1223–1224

Early Breast Cancer Trialist Group study, of chemotherapy, for node-negative breast cancer, 330–331
Ears, malignant melanoma of, plastic surgery for, 1335, 1338
Echocardiography, two-dimensional, in penetrating cardiac injuries, 699–702

Ectopic pregnancy, mimicking
appendicitis, laparoscopic surgery for, 478–480
Edema, in neurologic injuries, 907–908
Elderly women, breast cancer in, **289–308**
advanced, treatment of, 301–302
chemotherapy in, 301–302
tamoxifen in, 301
early-stage, treatment of, 292, 294–301
chemotherapy in, 300–301
co-morbid conditions and, 292, 294
hypofractionated radiation therapy in, 299
mastectomy alone or with radiation therapy in, 294–295
radiation therapy in, 296
tamoxifen in, 296–297, 299–300
presentation of, 289–290
screening for, 290, 292
survival in, 292
Elective lymph node dissection, for malignant melanoma, 1300–1301
to stage malignant melanoma, 1426
Electrical bioimpedance device, to monitor circulation, in shock, 989
Electrical injuries, management of, 942–943
Electrocardiograms, preoperative, cost effectiveness of, 17–18
Electrolyte requirements, in nutritional support, for gastrointestinal fistulas, 1051
Electrolytes, in neurologic injuries, 909–911
Emboli, air, after thoracotomy, for complex thoracic injuries, 739
pulmonary, prevention of, in severe burns, 948–949
Embolization, for arterial injuries, 846
Emphysema, laparoscopic Nissen fundoplication and, 445
Empyema, after complex thoracic injuries, 744–746
after thoracotomy, for complex thoracic injuries, 741
Endocrine therapy, for malignant melanoma, 1345
EndoLap, **595–602**
early attempts at, 595–596
in bowel resection, 602
in gastric tumor excision, 599
in hepaticogastrostomy, 599
modern era of, 596, 598
to control upper gastrointestinal bleeding, 598
to localize tumors and lesions, 598
Endoscopic hemostasis, for bleeding peptic ulcers, cost effectiveness of, 90–94
Endoscopic retrograde cholangiopancreatography, of bile duct leaks, 506
of complex pancreatic injuries, 786
of distal biliary obstruction, cost effectiveness of, 68
of pancreatic fistulas, 1164–1165
Endoscopic sphincterotomy, for bile duct leaks, 506, 509
Endoscopic stents, for pancreatic fistulas, 1168
Endoscopy, flexible, with laparoscopic surgery. See *EndoLap.*
gastrointestinal, before laparoscopic antireflux surgery, 439
interventional, for gastroduodenal fistulas, 1140–1141
Energy requirements, in nutritional support, for gastrointestinal fistulas, 1052–1054
Enteral nutrition, for gastrointestinal fistulas. See *Nutritional support.*
for severe burns, 946
for small bowel fistulas, 1178
Enterocutaneous fistulas, anatomy of, 1010–1011
aortoenteric. See *Aortoenteric fistulas.*
classification of, 1010–1012
pathophysiology of, 1013–1014
Epidermotropic theory, of histogenesis, of Paget's disease, of nipple-areola complex, 369–370
Epitheliosis, in proliferative breast disease, 224
Escharotomy, for severe burns, 932
Esophageal fistulas, 1021–1023, **1123–1135**
correction of fluid and electrolyte imbalances in, 1023
esophagocardiovascular, 1131–1133
aortoesophageal, 1131–1132
diagnosis of, 1131
pathogenesis of, 1131
treatment of, 1131–1132
esophagocardiac, 1132–1133
diagnosis of, 1132–1133
pathogenesis of, 1132
treatment of, 1133
esophagorespiratory, 1123–1131
benign, 1129–1131
diagnosis of, 1130
pathogenesis of, 1129–1130
treatment of, 1130–1131
malignant, 1123–1129
diagnosis of, 1124–1125
pathogenesis of, 1124
treatment of, 1125–1129
etiology and recognition of, 1021–1022
stabilization of, 1022–1023
Esophageal injuries, traumatic. See *Complex thoracic injuries.*
Esophageal intubation, for malignant esophagorespiratory fistulas, 1127
Esophageal manometry, before laparoscopic antireflux surgery, 439

Esophageal perforation, laparoscopic Nissen fundoplication and, 443
nasotracheal intubation and, 727
Esophagocardiac fistulas. See *Esophageal fistulas.*
Esophagocardiovascular fistulas. See *Esophageal fistulas.*
Esophagogastric carcinoma, laparoscopic surgery for, 564
Esophagogastroduodenoscopy, of aortoenteric fistulas, 1150
Esophagorespiratory fistulas. See *Esophageal fistulas.*
Esophagoscopy, of esophageal injuries, 727
Esophagostomy, cervical, for esophageal injuries, 732
in nutritional support, for gastrointestinal fistulas, 1066
Estrogen receptors, and chemotherapy, for node-negative breast cancer, 336–337
in breast cancer, in men, 349–350
External iliac artery injuries, traumatic, 849–850
Extrahepatic biliary tree, carcinoma of, laparoscopic surgery for, 562–564
Eyelids, malignant melanoma of, plastic surgery for, 1334–1335

Fasciotomy, for compartment syndrome, 855–857
with severe burns, 932
Feeding jejunostomies, for complex pancreatic injuries, 792
for severe burns, 946
Femoral artery injuries, traumatic, 849–850
Femoral shaft fractures, traumatic, 898
Fetal exposure, during chemotherapy, for breast cancer, 274–275
during radiation therapy, for breast cancer, 270, 271
Fibrosarcoma, of breast, 386
Fine-needle aspiration biopsies, of breast cancer, in men, 347
in pregnancy, 269
Finger fracture technique, hepatorrhaphy by, for complex hepatic injuries, 774–775
Firearm injuries, prevention of, cost effectiveness of, 57
Fistulas, aortoenteric. See *Aortoenteric fistulas.*
aortoesophageal. See *Esophageal fistulas.*
bronchopleural, after thoracotomy, for complex thoracic injuries, 740–741
cervical, etiology of, 1022, 1023
colocutaneous. See *Colocutaneous fistulas.*
colonic. See *Colonic fistulas.*
colovaginal, symptoms and signs of, 1184
colovesical. See *Colovesical fistulas.*
enterocutaneous. See *Enterocutaneous fistulas.*
esophageal. See *Esophageal fistulas.*
esophagocardiac. See *Esophageal fistulas.*
esophagocardiovascular. See *Esophageal fistulas.*
esophagorespiratory. See *Esophageal fistulas.*
gastroduodenal. See *Gastroduodenal fistulas.*
gastrointestinal. See *Gastrointestinal fistulas.*
jejunoileal. See *Jejunoileal fistulas.*
pancreatic. See *Pancreatic fistulas.*
small bowel. See *Small bowel fistulas.*
Fistulography, of gastrointestinal fistulas, 1083–1084
of small bowel fistulas, 1179
Fluid and electrolyte imbalances, with gastrointestinal fistulas. See *Gastrointestinal fistulas.*
with pancreatic fistulas, 1165
with small bowel fistulas, 1177
Fluid requirements, in severe burns, 928–929
Fluid therapy, for severe burns, 945
Fluorescent lights, and risk of malignant melanoma, 1216–1217
Fluorouracil, for node-negative breast cancer, with chlorambucil, Leukeran, and methotrexate, 329–330
with cyclophosphamide and methotrexate, 328–329
Forehead, malignant melanoma of, plastic surgery for, 1332–1333
Fractures, open. See *Complex orthopedic injuries.*
pelvic, screening for, in trauma care, cost effectiveness of, 52
urologic injuries with. See *Complex urologic injuries.*
with severe burns, 933–935
Freckling, and risk of malignant melanoma, 1214

Gallbladder carcinoma, cholelithiasis and, 496–497
laparoscopic surgery for, 562–564
Gallbladder disease, cost-effective management of, **117–128**
macroeconomic issues in, 118–119
microeconomic issues in, 119–126
anesthesia, 121–122
in ambulatory surgery centers, 125–126
management of common duct stones, 123

Gallbladder disease *(Continued)*
operative cholangiography, 122–123
perioperative management, 120–121
reimbursement issues, 126
reusable vs. disposable instruments, 124–125
Gamma Knife. See *Stereotactic radiosurgery.*
Gastric fistulas. See *Gastroduodenal fistulas.*
Gastric tumors, excision of, EndoLap in, 599
Gastroduodenal fistulas, 1023–1026, **1137–1146**
clinical features of, 1138–1139
correction of fluid and electrolyte imbalances in, 1024–1026
diagnosis of, 1138–1139
etiology and recognition of, 1023–1024, 1137–1138
management of, 1140–1142
outcome of, 1142, 1145
pathophysiology of, 1013
prognosis for, 1139–1140
stabilization of, 1024
Gastroesophageal reflux, antireflux surgery for. See *Antireflux surgery.*
incidence of, 438
Gastrointestinal bleeding, control of, EndoLap in, 598
with aortoenteric fistulas, 1149
Gastrointestinal endoscopy, before laparoscopic antireflux surgery, 439
Gastrointestinal fistulas, **1019–1033**
aortoenteric. See *Aortoenteric fistulas.*
colonic. See *Colonic fistulas.*
esophageal. See *Esophageal fistulas.*
gastroduodenal. See *Gastroduodenal fistulas.*
jejnoileal. See *Jejunoileal fistulas.*
nutritional support for. See *Nutritional support.*
outcome of, factors influencing, **1191–1198**
age, 1194
duration of fistula, 1196
etiology, 1194
fistula output, 1195
local fistula characteristics, 1193
occurrence of complications, 1193–1194
organ of origin, 1193
origin of patient, 1194–1195
serum protein level, 1195
type of nutritional support, 1195–1196
pancreatic. See *Pancreatic fistulas.*
radiologic investigation of, 1082–1084
radiologic treatment of, 1084–1093
abscessograms in, 1084
catheter position in, 1086, 1088–1089
catheter removal in, 1084
sepsis with. See *Sepsis.*
skin care for. See *Skin care.*
small bowel. See *Small bowel fistulas.*
stabilization of, goals of, 1020–1021
Gastrointestinal malignancies, laparoscopic surgery for, **557–569**
carcinoma of gallbladder and extrahepatic biliary tree, 562–564
colorectal carcinoma, 564–566
esophagogastric carcinoma, 564
hepatic malignancies, 561–562
lymphoma, 566
pancreatic malignancies, 558–561
Gastrostomy, in nutritional support, for gastrointestinal fistulas, 1066
for malignant esophagorespiratory fistulas, 1125–1126
Gene therapy, for malignant melanoma, 1371
Genetic testing, for inherited breast cancer, 206–207
Glucose, metabolism of, in neurologic injuries, 909
Glutamate, in neurologic injuries, 918
Gluteal flaps, in breast reconstruction, after breast cancer, 323
Grafts, autogenous vein, for arterial injuries, 847–848
pedicled mucosal, for complex duodenal injuries, 805
tissue, for severe open fractures, 891–892
Great vessel injuries, penetrating, 752–754
Groin node dissections, for malignant melanoma, 1304–1306
Gunshot wounds, cost-effective management of, 54–55
of kidney, 865–866
of neck, transcervical, 665–666
vs. stab wounds, 663, 665
of thorax, 750–751
Gynecologic pathology, mimicking appendicitis, laparoscopic surgery for, 472–480
benign adnexal disease, 474–475
ovarian cancer, 477–478
pelvic infections, 473–474
pelvic pain, 480
pregnancy complications, 478–480
uterine abnormalities, 475, 477

H_2 blockers, for bleeding peptic ulcers, cost effectiveness of, 90
Head and neck, malignant melanoma of, plastic surgery for, 1332
Heart, in shock, 655
Helicobacter pylori, eradication of, to prevent bleeding peptic ulcers, 96–97
Helmets, in traumatic injury prevention, 57

Hematomas, pelvic, abdominal vascular injuries and, 824
Hemodialysis, for renal failure, 979–980
Hemodynamics, trauma surgery and, 973
Hemoglobin, preoperative measurement of, cost effectiveness of, 19–20
Hemorrhage, after thoracotomy, for complex thoracic injuries, 740
  in nonoperative management, of complex hepatic injuries, 769–770
  in pelvic ring disruption, 881
Hemostasis, endoscopic, for bleeding peptic ulcers, cost effectiveness of, 90–94
  intrahepatic, for complex hepatic injuries, 774–775
  surgical, for bleeding peptic ulcers, cost effectiveness of, 94–95
Hemothorax, retained, after complex thoracic injuries, 743–744
Hepatic disease, nutritional support in, calorie requirements in, 1064
Hepatic injuries, complex. See *Complex hepatic injuries.*
Hepatic malignancies, laparoscopic surgery for, 561–562
Hepaticogastrostomy, EndoLap in, 599
Hepatorenal syndrome, acute renal failure and, 981
Hepatorrhaphy, by finger fracture technique, for complex hepatic injuries, 774–775
HER–2 oncogene expression, and chemotherapy, for node-negative breast cancer, 337–338
Hereditary non-polyposis coli, inherited breast cancer in, 210–211
Hernia, inguinal. See *Inguinal hernia.*
  paraesophageal, laparoscopic repair of, 447
Herniation, in neurologic injuries, 908
Herniorrhaphy, conventional, for inguinal hernia, cost effectiveness of, 107–109
  laparoscopic, **483–491**
    clinical experience with, 486, 488–489
    documentation of, 486
    for inguinal hernia, cost effectiveness of, 109–113
    historical aspects of, 484–485
    technique for, 485
    total extraperitoneal repair, 484, 485–486, 488
    transabdominal properitoneal repair, 484, 485, 486, 488
Hill fundoplication, for gastroesophageal reflux, 446–447
HIV-associated biliary disease, management of, 499
Hodgkin's lymphoma, laparoscopic surgery for, 566
Home parenteral nutrition, for gastrointestinal fistulas, 1075–1076
Hormonal therapy, for advanced breast cancer, in elderly women, 301
  for early-stage breast cancer, in elderly women, 296–297, 299–300
  for localized breast cancer, in men, 352
  for locally advanced noninflammatory breast cancer, 402–404
  for metastatic breast cancer, in men, 353–354
  for Paget's disease, of nipple-areola complex, 377–378
HRAS1 minisatellite locus, in inherited breast cancer, 213
Hydrogen ion, in neurologic injuries, 909–910
Hyperbaric oxygenation, for severe burns, 928
Hyperemia, in neurologic injuries, 907
Hyperventilation, for complex neurologic injuries, 916
Hypofractionated radiation therapy, for early-stage breast cancer, in elderly women, 299
Hypothermia, after thoracotomy, for complex thoracic injuries, 740
  in severe burns, 930
  prevention of, in complex hepatic injuries, 765

Ileal fistulas. See *Jejunoileal fistulas.*
Iliac artery injuries. See *Abdominal vascular injuries.*
Iliac vein injuries. See *Abdominal vascular injuries.*
Immunosuppressive states, and risk of malignant melanoma, 1215
Immunotherapy, for malignant melanoma, **1355–1381**
  active nonspecific, 1359–1360
  active specific, 1360–1361
  active specific with monoclonal antibodies, 1362–1364
  adjuvant, 1371
  adoptive cellular, 1368
  combination therapy in, 1369–1370
  cytokines in, 1347, 1364–1368, 1369–1370
    interferons, 1347–1348, 1364–1365
    interleukins, 1348, 1365–1367
  future challenges in, 1372–1373
  human leukocyte antigen restriction in, 1358
  immune response in, 1356–1358, 1359
  immunomodulation in, 1368–1369
  immunosuppression in, 1358–1359
  major histocompatibility complex restriction in, 1358

Immunotherapy *(Continued)*
new approaches to, 1371
regional, 1370
for node-negative breast cancer, 331
Infections, abdominal wall, with gastrointestinal fistulas, 1113–1115
bacterial, of aortic graft, 1149
in severe burns, 947
pelvic, mimicking appendicitis, laparoscopic surgery for, 473–474
Infectious complications, of enteral nutrition, for gastrointestinal fistulas, 1068–1069, 1072
Inflammatory breast cancer, **411–429**
classification, staging, and diagnosis of, 415
clinical features and natural course of, 413
historical aspects of, 411–412
incidence and age distribution of, 412–413
pathology of, 417–418
prognostic factors in, 416–417
treatment of, 418–420
local therapy in, 418
mastectomy and radiation therapy in, 420
mastectomy in, 418–419
multimodal, 420–425
radiation therapy in, 419
Inflow occlusion of heart, for penetrating cardiac injuries, 709
Inguinal hernia, cost-effective management of, **105–116**
conventional herniorrhaphy in, 107–109
hospitalization and anesthesia in, 106–107
laparoscopic repair in, 109–113
Inhalation injuries. See *Severe burns.*
Inherited breast cancer, **205–220**
androgen receptor in, 213
ataxia-telangiectasia in, 212–213
autosomal dominant, 207–212
BRCA1 gene in, 208–209, 214–216, 233
BRCA2 gene in, 210, 214, 216, 233, 345
Cowden's disease, 211
Li-Fraumeni syndrome, 207–208
Muir-Torre syndrome, 210–211
Peutz-Jeghers syndrome, 211–212
BRCA3 gene in, 213
genetic testing for, 206–207
HRAS1 minisatellite locus in, 213
predictive testing for, 214–216
prognostic factors in, 214
risk assessment for, 213–214
therapeutic options in, 216–217
tumor suppressor genes in, 206
Injection therapy, for bleeding peptic ulcers, cost effectiveness of, 91–94
Injury prevention, in trauma care, cost effectiveness of, 55–58
Interferons, for malignant melanoma, 1347–1348, 1364–1365
Interleukins, for malignant melanoma, 1348, 1365–1367
Interventional endoscopy, for gastroduodenal fistulas, 1140–1141
Interventional radiology, for gastrointestinal fistulas. See *Gastrointestinal fistulas.*
Intervertebral disc herniation, with facet dislocation, complicating spinal cord injury, 919–920
Intra-abdominal abscesses, with gastrointestinal fistulas, 1113
Intra-abdominal injuries, missed, in nonoperative management, of complex hepatic injuries, 768
traumatic, cost-effective management of, 54
Intra-abdominal sepsis, with gastrointestinal fistulas, operative management of, 1119–1121
Intracranial pressure, in neurologic injuries. See *Complex neurologic injuries.*
Intraluminal shunts, for arterial injuries, 847
Intransit metastases, from malignant melanoma, operative management of, 1307–1308
Intravenous pyelography, of renal injuries, 861–862, 863
Ionizing radiation, and risk of malignant melanoma, 1216–1217

Jaundice, malignant obstructive. See *Malignant obstructive jaundice.*
Jejunoileal fistulas, 1028–1029
correction of fluid and electrolyte imbalances in, 1029
etiology and recognition of, 1028
stabilization of, 1028
Jejunostomy, in nutritional support, for complex pancreatic injuries, 792
for gastrointestinal fistulas, 1066–1067
for malignant esophagorespiratory fistulas, 1125–1126
for severe burns, 946

Kidneys, gunshot wounds of, 865–866
in shock, 654–655

Lactate, as indicator of severity of shock, 651–652

Lactation, breast cancer in. See *Pregnancy.*
Lactic acidosis, in trauma surgery, 961
Laparoscopic cholecystectomy, for gallbladder disease. See *Gallbladder disease.*
Laparoscopic herniorrhaphy, for inguinal hernia, cost effectiveness of, 109–113
Laparoscopic surgery, adrenalectomy. See *Adrenalectomy.*
antireflux surgery. See *Antireflux surgery.*
appendectomy. See *Appendectomy.*
cardiomyotomy. See *Cardiomyotomy.*
cholecystectomy. See *Cholecystectomy.*
colon resection. See *Colon resection.*
costs of, **631–639**
direct vs. indirect, 633–634
efficiency and demand elasticity in, 637–638
fixed vs. variable, 634–636
vs. quality, 631–633
difficult, **603–613**
adhesiolysis in, 608–609
alternate access techniques in, 606–608
causes of, 603–604
equipment failure in, 611–612
management of bleeding in, 609–611
preoperative preparation for, 604, 606
tissue extraction in, 611
flexible endoscopy with. See *EndoLap.*
for common bile duct injuries. See *Common bile duct injuries.*
for gastrointestinal malignancies. See *Gastrointestinal malignancies.*
for gynecologic pathology. See *Gynecologic pathology.*
for trauma. See *Trauma.*
herniorrhaphy. See *Herniorrhaphy.*
pancreatectomy. See *Pancreatectomy.*
pelvic lymphadenectomy. See *Pelvic lymphadenectomy.*
splenectomy. See *Splenectomy.*
training and privileging in, **615–621**
additional privileges for new procedures, 616
advanced laparoscopy, 618–619
basic laparoscopy, 618
experimental procedures, 619–620
learning curve in, 617–618
performance assessment in, 620
privileging process, 615–616
surgical education in, 616–617
vagotomy. See *Vagotomy.*
Laparoscopy, in trauma care, cost effectiveness of, 54–55
Laparotomy, for complex duodenal injuries, 799–800
Laryngeal injuries, traumatic, 677–678
Latissimus dorsi myocutaneous flaps, in breast reconstruction, after breast cancer, 319, 321
Lazaroids, in neurologic injuries, 918
Leiomyomata, mimicking appendicitis, laparoscopic surgery for, 475, 477
Lentigo maligna melanoma, dermatologic perspective on, 1293
pathology of, 1230, 1233
Leukeran, with methotrexate, fluorouracil, and chlorambucil, for node-negative breast cancer, 329–330
Li-Fraumeni syndrome, inherited breast cancer in, 207–208
Limb ischemia, in severe burns, 931–932
Lips, malignant melanoma of, plastic surgery for, 1335
Liver, in shock, 656
Llermitte-Duclos disease, inherited breast cancer in, 211
Lobular carcinoma in situ, and risk of invasive breast cancer, 234–235
in men, 348
in proliferative breast disease, 225–226
Locally advanced noninflammatory breast cancer, **393–410**
natural history of, 394–395
prognostic factors in, 407
staging of, 393–394
treatment of, 396–407
combined surgery and radiation therapy in, 398–399
multimodal, 399–407
breast conservation in, 404–407
neoadjuvant, 400, 402
with hormonal therapy, 402–404
radiation therapy in, 397–398
surgery alone in, 396–397
Lower extremity injuries, traumatic, prevention of, cost effectiveness of, 56
Lumpectomy, with radiation therapy, for breast cancer, in pregnancy, 271
for ductal carcinoma in situ, 255, 257, 261
Lung injuries, with penetrating thoracic vascular injuries, 756
Lungs, in shock, 654
Lymph node biopsies, for breast cancer, cost effectiveness of, 29–30
Lymph node dissection, elective, for malignant melanoma, 1300–1301
to stage malignant melanoma, 1426
Lymphadenectomy, pelvic. See *Pelvic lymphadenectomy.*
Lymphedema, groin node dissections and, for malignant melanoma, 1305
Lymphomas, laparoscopic surgery for, 566
Lynch syndrome II, inherited breast cancer in, 210–211
Lysis centrifugation, of organisms, in central venous catheter sepsis, 1059

Magnetic resonance imaging, of aortoenteric fistulas, 1151
of metastatic disease, from malignant melanoma, 1401–1402
Malignancies, gastrointestinal. See *Gastrointestinal malignancies.*
Malignant fibrous histiocytoma, of breast, 386
Malignant melanoma, computer database registry for, **1273–1285**
computer program for, 1274–1277
patient population in, 1274
results of, 1277–1282
chart documentation, 1282
clinical management, 1277–1278
clinical research, 1281–1282
continuous quality improvement, 1278–1281
costs and customization, 1282
cytogenetic abnormalities in. See *Cytogenetic abnormalities.*
dermatologic perspective on, **1287–1298**
biopsies in, 1294
dermatologist's role, 1294–1295
epidemiology of, 1287
precursor lesions, 1288–1291
common acquired melanocytic nevi, 1290
congenital melanocytic nevi, 1289–1290
dysplastic nevi, 1290–1291
preventive measures in, 1294
primary cutaneous melanoma, 1291–1293
acral lentiginous melanoma, 1293
lentigo maligna melanoma, 1293
nodular, 1292
superficial spreading, 1292
risk factors, 1288
ultraviolet radiation in, 1287–1288
epidemiology of, **1205–1222**
descriptive studies in, 1205–1213
of cumulative risk, 1206
of incidence, 1205–1206
of mortality, 1206–1207
of place, 1208, 1210
of prevalence, 1206
of survival, 1207
of time and person, 1210, 1213
risk factors in, 1213–1218
anthropometric indices, 1214–1215
benign melanocytic nevi, 1214
diet, 1217–1218
family history, 1213
fluorescent lights, ionizing radiation, and occupation, 1216–1217
freckling, 1214
immunosuppressive states, 1215
pigment traits, 1213–1214
prognostic factors, 1218
reproductive factors, 1217
skin reaction to sunlight, 1214
sun exposure, 1215–1216
immunotherapy for. See *Immunotherapy.*
medical management of, **1343–1354**
combination chemotherapy in, 1346–1347
with biologic therapy, 1347–1348
high-dose chemotherapy in, with or without bone marrow transplantation, 1345–1346
single-agent chemotherapy in, 1344–1345
multidisciplinary center approach to, **1433–1439**
clinical expertise in, 1434
clinical research in, 1434–1435
education in, 1434
ideal components of, 1437–1438
UCSF database in, 1435–1437
operative management of, **1299–1312**
adjuvant therapy in, 1307
at specific sites, 1309
elective lymph node dissection in, 1300–1301
for intransit metastases, 1307–1308
for primary lesion, 1299–1300
node dissections in, 1304–1307
axillary, 1306–1307
groin, 1304–1306
neck, 1307
popliteal, 1307
resection of distant metastases in, 1308–1309
sentinel node biopsies in, 1301–1304
pathology of, **1223–1255**
benign clinicopathologic simulators of melanoma, 1223–1227
atypical melanocytic hyperplasia, 1224, 1226
dysplastic nevi, 1223–1224
spindle cell nevi of Reed, 1227
Spitz nevi, 1226–1227
histologic prognostic parameters, 1242–1253
depth of invasion, 1242–1243
histogenic type, 1245–1246
host response, 1246
linear depth of invasion, 1243
microscopic satellites, 1251
mitotic rate, 1251
phase of tumor progression, 1243
regression, 1251
tumor cell type, 1253
ulceration, 1251
vascular invasion, 1253
melanoma in situ, 1233–1234
radial growth phase melanoma, 1227, 1230–1233
acral lentiginous melanoma, 1230

definition of, 1227, 1230
lentigo maligna melanoma, 1230, 1233
superficial spreading melanoma, 1230
vertical growth phase, 1234
variants of, 1236–1242
perfusion chemotherapy for. See *Perfusion chemotherapy.*
plastic surgery for. See *Plastic surgery.*
psychological challenges in, **1413–1421**
need for proportion and balance, 1414–1415
obstacles to proportion and balance, 1415–1419
ambiguity, 1415–1416
dangers of optimism, 1418
interpersonal dynamics, 1416
meaning of illness, 1417
past coping style, 1417
pressure to be positive, 1416–1417
response of physicians, 1418–1419
physicians' help in, 1419–1421
radiation therapy for. See *Radiation therapy.*
staging and surveillance of, under financial restrictions, **1423–1432**
costs in, 1430
for newly diagnosed patients, 1424–1425
novel staging techniques in, 1425–1427
to brain, stereotactic radiosurgery for. See *Stereotactic radiosurgery.*
vs. Paget's disease, of nipple-areola complex, 371
Malignant obstructive jaundice, cost-effective management of, **63–70**
distal biliary obstruction, 67–70
history and physical examination in, 64–65
proximal biliary obstruction, 65–67
resectability of, 66–67
Malnutrition, with enterocutaneous fistulas, 1011–1012
with small bowel fistulas, 1177
Mammography, of breast cancer, ductal carcinoma in situ, 253–255
in elderly women, 290, 292
in men, 346–347
in pregnancy, 269
sarcoma, 385–386
of Paget's disease, of nipple-areola complex, 368
periodic, vs. prophylactic mastectomy, for breast cancer, 238
to screen for breast cancer, cost effectiveness of, 32–33
Manometry, esophageal, before laparoscopic antireflux surgery, 439
Mass screening, cost effectiveness of, **11–23**
utility of previous test results, 14–15
potential risks of, 12–13
recommendations for, 15–21
blood chemistries, 20
chest radiographs, 15, 17
coagulation studies, 20
electrocardiograms, 17–18
hemoglobin, 19–20
in children, 20–21
urinalysis, 18–19
results of, 11–12
selective tests in, errors with, 14
results of, 13–14
Mastectomy, for breast cancer, in pregnancy, 270
for ductal carcinoma in situ, 257
for early-stage breast cancer, in elderly women, 294–295
for inflammatory breast cancer, 418–419, 420–425
for localized breast cancer, in men, 350
for locally advanced noninflammatory breast cancer, 396–397, 398–400
prophylactic. See *Prophylactic mastectomy.*
Mechanical ventilation, after thoracotomy, for complex thoracic injuries, 741–742
for severe burns, 940–941, 947–948
high-frequency, in trauma surgery, 975–976
Median sternotomy, for penetrating cardiac injuries, 708
for traumatic thoracic injuries, 738
Melanocytic hyperplasia, pathology of, 1224, 1226
Melanocytic nevi, benign, and risk of malignant melanoma, 1214
Melanoma in situ, pathology of, 1233–1234
Melatonin, for malignant melanoma, 1345
Men, breast cancer in, **343–363**
adjuvant therapy for, 352
clinical features of, 345–347
epidemiology of, 343–345
in greater Milwaukee area, 354–358
localized, treatment of, 350–351
metastatic, treatment of, 353–354
pathology of, 347–348
prognostic factors in, 348–350
survival in, vs. women, 351–352
Metabolic complications, of enteral nutrition, for gastrointestinal fistulas, 1068
of total parenteral nutrition, for gastrointestinal fistulas, 1059–1060
Metastatic disease, from malignant melanoma, imaging of, 1401–1402
operative management of, 1307–1309
radiation therapy for, 1392
signs and symptoms of, 1400–1401
stereotactic radiosurgery for. See *Stereotactic radiosurgery.*

Methotrexate, for node-negative breast cancer, with cyclophosphamide and fluorouracil, 328–329
with Leukeran, fluorouracil, and chlorambucil, 229–230
Microcirculation, in shock, 653–654
Molecular markers, of risk, in breast cancer, 227
Monoclonal antibodies, for malignant melanoma, 1362–1364
Mucosal grafts, pedicled, for complex duodenal injuries, 805
Mucosal melanoma, radiation therapy for, 1386–1387, 1389
Mucosal perforation, laparoscopic cardiomyotomy and, 454
Muir-Torre syndrome, inherited breast cancer in, 210–211
Myocardial contusion, screening for, in trauma care, cost effectiveness of, 53

Nasogastric intubation, in enteral nutrition, for gastrointestinal fistulas, 1066
Nasotracheal intubation, and esophageal perforation, 727
Nausea and vomiting, after laparoscopic cholecystectomy, avoidance of, 121–122
Neck, malignant melanoma of, plastic surgery for, 1338
Neck node dissections, for malignant melanoma, 1307
Neck trauma, penetrating. See *Penetrating neck trauma.*
Needle aspiration biopsies, of breast cancer, cost effectiveness of, 27, 28
Nerve injuries, traumatic, 855
Neurologic injuries, complex. See *Complex neurologic injuries.*
with severe burns, 938–939
Neuroreflexes, homeostatic, in shock, 652–653
Nevi, acquired melanocytic, as precursor to malignant melanoma, 1290
benign melanocytic, and risk of malignant melanoma, 1214
congenital melanocytic, as precursor to malignant melanoma, 1289–1290
dysplastic, as precursor to malignant melanoma, 1290–1291
pathology of, 1223–1224
spindle cell of Reed, pathology of, 1227
Spitz, pathology of, 1226–1227
Nevoid melanoma, pathology of, 1239
Nipple-areola complex, Paget's disease of. See *Paget's disease.*
reconstruction of, in breast reconstruction, after breast cancer, 323–324
Nissen fundoplication, for gastroesophageal reflux. See *Antireflux surgery.*
Nitric oxide, for severe burns, 942
Nitrogen requirements, in nutritional support, for gastrointestinal fistulas, 1052–1054
Nitrosoureas, for malignant melanoma, 1344–1345
NMDA receptor antagonists, in neurologic injuries, 918
Node-negative breast cancer, chemotherapy for, **327–341**
bacille Calmette-Guérin, 329–330
benefits of, 328–329
cathepsin D and, 338–340
chlorambucil, Leukeran, methotrexate, and fluorouracil, 329–330
cyclophosphamide, 329
cyclophosphamide, methotrexate, and fluorouracil, 328–329
DNA/S phase and, 337
Early Breast Cancer Trialist Group study on, 330–331
HER-2 oncogene expression and, 337–338
histologic grading system and, 336
OSAKO study on, 329–330
steroid receptors and, 336–337
tamoxifen, 329–332
tumor size and, 335–336
Nodular melanoma, dermatologic perspective on, 1292
Non-carcinoma in situ lesions, in proliferative breast disease, 224–225
Non-Hodgkin's lymphoma, laparoscopic surgery for, 566
Nonsteroidal anti-inflammatory drugs, avoidance of, to prevent bleeding peptic ulcers, 96–97
Nose, malignant melanoma of, plastic surgery for, 1333–1334
Nutritional support, for gastroduodenal fistulas, 1025–1026, 1140
for gastrointestinal fistulas, **1035–1080**
and outcome, 1195–1196
calorie-to-nitrogen ratio in, 1054
duration of, 1073–1076
energy and nitrogen requirements in, 1052–1054
enteral nutrition in, 1065–1066
access for, 1066–1067
complications of, 1067–1069, 1072
efficacy of, 1067
home administration of, 1075–1076
monitoring of, 1072
patient assessment for, 1035–1037
rationale for, 1037, 1049
rationale for, 1049–1050
starting, 1051
stopping, 1074–1075

stopping oral intake before, 1051
surgical options in, 1073–1076
total parenteral nutrition in, formulations for, 1062–1065
in febrile patient, 1058–1060
monitoring of, 1065
standardized order form for, 1060
three-in-one concept of, 1060
venous access for, 1054–1055
complications of, 1057–1058
vitamin and trace element requirements in, 1054
water and electrolyte requirements in, 1051
for small bowel fistulas, 1177–1180
Nutritional therapy, for severe burns, 946

Occupation, and risk of malignant melanoma, 1216–1217
Octreotide, for complex pancreatic injuries, 792
for gastroduodenal fistulas, 1140
for pancreatic fistulas, 1167–1168
for small bowel fistulas, 1180
to prevent pancreatic fistulas, 1171
Oliguria, in trauma surgery, 960–961, 977–979
Omental pack, viable, for complex hepatic injuries, 775–776
Omeprazole, for bleeding peptic ulcers, cost effectiveness of, 90
Oophorectomy, prophylactic, for inherited breast cancer, 216
Open fractures. See *Complex orthopedic injuries.*
Orchiectomy, for metastatic breast cancer, in men, 353
Organ transplantation, cholelithiasis with, 498
Orthopedic injuries, complex. See *Complex orthopedic injuries.*
traumatic, 855
with severe burns, 933–935
OSAKO study, of chemotherapy, for node-negative breast cancer, 329–330
Osteoporosis, chemotherapy and, for breast cancer, in young women, 283
Ovarian ablation, chemotherapy and, for breast cancer, in young women, 283
for node-negative breast cancer, 331
Ovarian cancer, mimicking appendicitis, laparoscopic surgery for, 477–478
Ovarian cysts, ruptured, mimicking appendicitis, laparoscopic surgery for, 474–475
Oxygen, for severe burns, 942
to maintain breathing, in severe burns, 927–928
Oxygen debt, in shock, 648, 651
Oxygen delivery, in neurologic injuries, 909
Oxygen tensions, transcutaneous measurement of, in shock, 990
Oxygen therapy, end point of, in trauma surgery, 965–968
Oxygen toxicity, in trauma surgery, 972
Oxygen transport parameters, in trauma surgery, 962–964
arteriovenous oxygen difference, 963–964
mixed venous oxygen content, 963
oxygen content, 963
oxygen delivery and consumption, 964
oxygen extraction ratio, 964
Oxyhemoglobin saturation, in shock, 652

p53 gene, in ductal carcinoma in situ, 250–251
in inherited breast cancer, 208
Paget's disease, of nipple-areola complex, **365–381**
clinical features of, 367–368
historical aspects of, 366
palpable vs. nipple changes only, 373
pathology and histogenesis of, 368–373
treatment of, 373–378
excision and radiation therapy in, 373–376
tamoxifen in, 377–378
with ductal carcinoma in situ, 372, 375–376
Pancreatectomy, distal, for complex pancreatic injuries, 788–789
laparoscopic, **539–545**
instrumentation for, 540
operating room set-up for, 541
patient selection for, 540–541
results of, 545
techniques for, 541–545
pancreaticoduodenectomy, 544–545
with splenectomy, 541–543
with splenic salvage, 543–544
training for, 539–540
Pancreatic abscesses, complex pancreatic injuries and, 793
Pancreatic fistulas, 1026–1027, **1159–1173**
classification of, 1159–1160
complex pancreatic injuries and, 792–793
correction of fluid and electrolyte imbalances in, 1027
diagnosis of, 1163–1164
etiology and recognition of, 1026–1027, 1160–1162
imaging studies of, 1164–1165

Pancreatic fistulas *(Continued)*
nonoperative management of, 1165–1166
endoscopic stents in, 1168
somatostatin and analogues in, 1166–1168
operative management of, 1169
prevention of, 1170–1171
stabilization of, 1027
Pancreatic injuries, complex. See *Complex pancreatic injuries.*
with renal injuries, 869–870
Pancreatic malignancies, laparoscopic surgery for, 558–561
Pancreaticoduodenal injuries, management of, 791–792, 809
Pancreaticoduodenectomy, for complex duodenal injuries, 808–809
laparoscopic, technique for, 544–545
Pancreatitis, and pancreatic fistulas, 1161–1162
complex pancreatic injuries and, 793
sludge, management of, 500
Pancreatography, of complex duodenal injuries, 801
Papillomatosis, in proliferative breast disease, 224
Paraesophageal hernias, laparoscopic repair of, 447
Parenteral nutrition. See *Nutritional support.*
Parotid injuries, traumatic, 674, 676
Partial thromboplastin time, preoperative, cost effectiveness of, 20
Pediatric patients, mass screening in, cost effectiveness of, 20–21
Pedicled mucosal grafts, for complex duodenal injuries, 805
Pelvic fractures, screening for, in trauma care, cost effectiveness of, 52
urologic injuries with. See *Complex urologic injuries.*
Pelvic hematomas, abdominal vascular injuries and, 824
Pelvic infections, mimicking appendicitis, laparoscopic surgery for, 473–474
Pelvic lymphadenectomy, laparoscopic, **585–593**
complications of, 590–592
instrumentation for, 586
patient selection for, 585–586
technique for, 586–590
Pelvic pain, mimicking appendicitis, laparoscopic surgery for, 480
Pelvic ring disruption, high-energy. See *Complex orthopedic injuries.*
Penetrating cardiac injuries, **685–724**
clinical features of, 693–697
complex and combined injuries, 712–713
current management of, 716–719
emergency department thoracotomy for, 702–707
evaluation of, 697–702
subxiphoid pericardial window in, 697–699
two-dimensional echocardiography in, 699–702
historical aspects of, 686–693
injury scales in, 712
pericardial tamponade in, 694–696
repair of, 707–711
adjunct maneuvers in, 708–709
bioprosthetic and autogenous materials in, 711
for atrial injuries, 710
for coronary artery injuries, 710–711
for ventricular injuries, 710
incisions in, 707–708
Penetrating neck trauma, **661–683**
angiography of, 662
vs. color flow Doppler imaging, 663
carotid injuries, 667–671
minor, 670–671
nonsymptomatic occlusion, 670
repair or ligation of, 668–669
shunts during, 670
surgical exposure of, 668
combined tracheoesophageal injuries, 679
emergency department management of, 666–667
gunshot vs. stab wounds in, 663, 665
laryngeal injuries, 677–678
mandatory surgery vs. conservatism in, 661–662
parotid injuries, 674, 676
pharyngoesophageal injuries, 678–679
physical examination of, 662–663
subclavian vessel injuries, 671
thoracic duct injuries, 679
tracheal injuries, 677
transcervical gunshot wounds in, 665–666
vertebral artery injuries, 671–674
Penetrating thoracic vascular injuries, **749–761**
complications of, 758
exposure and control of, 752–757
adjuncts to, 757
brachiocephalic venous injuries, 756
great vessel injuries, 752–754
thoracic outlet injuries, 754–756
historical aspects of, 749
injury patterns in, 750–751
intensive care unit issues in, 757–758
lung injuries with, 756
medical legal issues in, 759
pathophysiology of, 750
postoperative sequelae of, 758
prehospital and emergency department issues in, 751–752
rehabilitation of, 758

socioeconomic issues in, 759
tracheal injuries with, 756–757
Penetrating trauma, laparoscopic surgery for, 551–552
Penile amputation, traumatic, 876
Peptic ulcer bleeding, cost-effective management of, **83–103**
angiographic therapy in, 95
blood transfusions in, 96
endoscopic treatment in, 90–94
hospital costs in, 84–88
long-term treatment in, 96–97
medical treatment in, 90
prognostic indicators in, 88–90
surgical hemostasis in, 94–95
Peptic ulcer disease, vagotomy for. See *Vagotomy.*
Percutaneous biopsies, of distal biliary obstruction, cost effectiveness of, 68–69
Perfusion chemotherapy, for malignant melanoma, **1313–1330**
advantages of, 1314
complications of, 1325–1327
disadvantages of, 1315
dosage determination in, 1316–1317
drugs and dosages in, 1316
indications for, 1315
multiple perfusions in, 1323–1325
results of, 1317–1323
techniques for, 1315–1316
Pericardial tamponade, in penetrating cardiac injuries, 694–696
Pericardiocentesis, to evaluate penetrating cardiac injuries, vs. subxiphoid pericardial window, 698
Perihepatic packing, for complex hepatic injuries, 777
Peripheral nerve transection, vascular injury complicating, 919
Peripheral vascular injuries, difficult. See *Difficult peripheral vascular injuries.*
Peutz-Jeghers syndrome, inherited breast cancer in, 211–212
Pharyngoesophageal injuries, traumatic, 678–679
Pharyngostomy, in nutritional support, for gastrointestinal fistulas, 1066
Pigmentation, and risk of malignant melanoma, 1213–1214
Plain films, of aortoenteric fistulas, 1151
of complex duodenal injuries, 799
of complex neurologic injuries, vs. computed tomography, 912
of tibial plateau fractures, 896
Plastic surgery, for malignant melanoma, **1331–1342**
for extensive defects, 1338
in esthetically sensitive areas, 1332–1338
surgical design in, 1331–1332
Pleural fluid collections, complex thoracic injuries and. See *Complex thoracic injuries.*
Pneumomediastinum, traumatic, 729–730
Pneumonia, in trauma surgery, 973
Pneumopericardium, traumatic, 729–730
Pneumothorax, laparoscopic Nissen fundoplication and, 443
Polytetrafluoroethylene grafts, for arterial injuries, 847–848
Popliteal artery injuries, traumatic, 851–852
Popliteal node dissections, for malignant melanoma, 1307
Portal triad occlusion, for complex hepatic injuries, 773–774
Portal vein injuries. See *Abdominal vascular injuries.*
Positron emission tomography, to stage malignant melanoma, 1425–1426
Posterior internal fixation, for pelvic ring disruption, 887
Posterolateral thoracotomy, for penetrating cardiac injuries, 708
Pouches, in skin care, for gastrointestinal fistulas, 1097, 1100–1101
Pregnancy, after breast cancer, 275–276
in young women, 283–284
breast cancer in, **267–278**
diagnosis of, 269–270
delay in, 268–269
etiology of, 268
historical aspects of, 267–268
incidence of, 268
postoperative adjuvant therapy for, 274–275
preoperative staging of, 270
primary treatment of, 270–271
prognostic factors in, 272–273
steroid hormone receptors in, 271–272
therapeutic abortion for, 273–274
Pregnancy complications, mimicking appendicitis, laparoscopic surgery for, 478–480
Pringle maneuver, for complex hepatic injuries, 773–774
Proliferative breast disease. See *Breast cancer.*
Prophylactic mastectomy, for breast cancer, **231–242**
bilateral, 216
criteria for prophylaxis, 235–236
indications for, 239–240
multidisciplinary approach to, 239–240
practice standards for, 240
risk factors for cancer and, 232–235, 238
familial/hereditary, 232–234
histology and, 234–235
technique for, 236–237

Prophylactic mastectomy *(Continued)*
vs. mammographic surveillance, 238
Prophylactic oophorectomy, for inherited breast cancer, 216
Prothrombin time, preoperative, cost effectiveness of, 20
Proton pump inhibitors, for bleeding peptic ulcers, cost effectiveness of, 90
Proximal biliary obstruction, cost-effective management of, 65–67
Proximal gastric vagotomy, for peptic ulcer disease, 518–519, 520
Pseudocysts, complex pancreatic injuries and, 793
pancreatic, 1160
Pulmonary emboli, prevention of, in severe burns, 948–949
Pulmonary hilum, clamping of, for penetrating cardiac injuries, 709
Pulmonary management, in trauma surgery, 971–976
barotrauma, 972
hemodynamics, 973
high-frequency mechanical ventilation in, 975–976
weaning from, 976
oxygen toxicity, 972
pneumonia, 973
translaryngeal tube, 973
volutrauma, 972–973
Pulmonary resection, after penetrating thoracic injuries, 735
Pulmonary system, in abdominal compartment syndrome, 834–835
PVB regimen of chemotherapy, for malignant melanoma, 1346–1347
Pyloric exclusion procedure, for complex pancreatic injuries, 791–792

Radial artery injuries, traumatic, 849
Radiation therapy, and colonic fistulas, 1014
management of, 1189
for breast cancer, breast sarcoma due to, 388–389
cost effectiveness of, 30–31
in pregnancy, 271
for breast sarcoma, 388
for ductal carcinoma in situ, 255, 257, 260–261
for early-stage breast cancer, in elderly women, 294–295, 296
for inflammatory breast cancer, 419, 420–425
for localized breast cancer, in men, 350–351
for locally advanced noninflammatory breast cancer, 397–400, 402–407
breast conservation in, 404–407
for malignant esophagorespiratory fistulas, 1126–1127
for malignant melanoma, **1383–1398**
adjunctive, 1387–1392
and local-regional control, 1387–1389
clinical experience with, 1389–1392
as primary treatment, 1386–1387
for advanced or metastatic melanoma, 1392–1394
inherent radiation sensitivity in, 1384–1385
investigational, 1394
number of clonogens in, 1384
oxygenation in, 1385
proliferation kinetics and fractionation sensitivity in, 1385
for Paget's disease, of nipple-areola complex, 374–376
hypofractionated, for early-stage breast cancer, in elderly women, 299
Radiographs, in trauma care, cost effectiveness of, 51–52
Radiosurgery, stereotactic. See *Stereotactic radiosurgery.*
Renal dysfunction, in trauma surgery, 976–981
acute, 976–977
oliguria, 977–979
prevention of, 979
renal replacement therapy for, 979–981
Renal injuries. See *Complex urologic injuries.*
Renal replacement therapy, for renal failure, 979–981
Renal system, in abdominal compartment syndrome, 835
Reproductive factors, and risk of malignant melanoma, 1217
Respiration, management of, in severe burns, 947–948
Resting energy expenditure, in severe burns, 946
Right atrial catheters, in nutritional support, for gastrointestinal fistulas, 1054–1055
RNA detection, to stage malignant melanoma, 1426–1427

Sacroiliac dislocation, traumatic, 887
Saline implants, in breast reconstruction, after breast cancer, 314
Sandostatin, for gastroduodenal fistulas, 1140
Sarcoma, of breast, **383–392**
angiosarcoma, 386–387, 389
clinical features of, 385–386

cystosarcoma phyllodes, 384–385, 389–390
etiology of, 385
fibrosarcoma, 386
malignant fibrous histiocytoma, 386
radiation-induced, 388–389
treatment of, 387–389
excision in, 387–388
with chemotherapy, 388
with radiation therapy, 388
Scalp, malignant melanoma of, plastic surgery for, 1332
Scintigraphy, of small bowel fistulas, 1179
Seat belts, in traumatic injury prevention, 56
Sentinel node biopsies, for breast cancer, cost effectiveness of, 29–30
Sentinel node biopsies, for malignant melanoma, 1301–1304
Sepsis, management of, in severe burns, 945–948
with gastrointestinal fistulas, **1111–1122**
central venous catheters and, 1058–1060
identifying focus of, 1115–1117
operative management of, 1117–1121
indications for, 1117
intra-abdominal sepsis, 1119–1121
wound care in, 1117–1119
pathophysiology of, 1112–1117
abdominal wall infections in, 1113–1115
intra-abdominal abscesses in, 1113
with small bowel fistulas, 1178
Serosal patch, for complex duodenal injuries, 805
Serum amylase levels, in complex duodenal injuries, 799
in complex pancreatic injuries, 786
Serum protein level, and outcome of gastrointestinal fistulas, 1195
Severe burns, with associated trauma, **923–957**
abdominal injuries, 936–938
critical care and ICU issues in, 943–950
individual optimization of resuscitation, 943–945
pain management, 949–950
prevention of deep venous thrombosis and pulmonary embolism, 948–949
sepsis management, 945–948
special fluid therapy, 945
team approach to, 950
inhalation injuries, 939–943
treatment of, 940–943
initial management of, 926–930
airway, 926–927
breathing, 927–928
circulation/resuscitation, 928–930
disability, 930
for hypothermia, 930
venous access, 930
mechanism of injury in, 925–926
neurologic injuries, 938–939
nonaccidental abuse and assault, 932–933
orthopedic injuries, 933–935
reassessment of, 930–932
recent data on, 923–925
thoracic injuries, 936
vascular injuries, 938
Shock, blood pressure maintenance in, 653
brain in, 655–656
definition of, 647–652
early recognition and management of, **985–997**
cardiac output estimation in, 991
initial values during resuscitation, 991–992
invasive hemodynamic monitoring in, 986–988
clinical studies and protocol in, 988–989
noninvasive monitoring in, 989–990
clinical studies and protocol in, 990–991
temporal patterns of monitored variables, 992, 994
heart in, 655
kidneys in, 654–655
liver in, 656
lungs in, 654
management of, **645–660**, 959–960
current approach to, 656–658
historical aspects of, 645–647
oxygen debt in, 648, 651
oxyhemoglobin saturation in, 652
pathophysiology of, 652–654, 986
effects on cells and organelles, 653
homeostatic neuroreflexes, 652–653
microcirculation in, 653–654
severity of, lactate as indicator of, 651–652
Shunts, atriocaval, for complex hepatic injuries, 778–779
intraluminal, for arterial injuries, 847
Silicone implants, in breast reconstruction, after breast cancer, 312–314
Skin barriers, in skin care, for gastrointestinal fistulas, 1097–1098, 1100
Skin cancer, risk of, xeroderma pigmentosum and, 1288
Skin care, for gastrointestinal fistulas, **1095–1109**
case reports of, 1101–1107
dressings in, 1100
goals of, 1095–1096

Skin care *(Continued)*
patient assessment for, 1096–1100
pouches in, 1097, 1100–1101
skin barriers in, 1097–1098, 1100
techniques for, 1100–1107
for pancreatic fistulas, 1165–1166
Skull radiographs, in trauma care, cost effectiveness of, 52
Sludge pancreatitis, management of, 500
Small bowel fistulas, **1175–1181**
classification of, 1175–1176
complications of, 1177–1178
etiology of, 1176
management of, decision making in, 1178–1180
pathophysiology of, 1013–1014, 1176–1177
Soft tissue evaluation, in severe open fractures, 888
Soft tissue injuries, traumatic, 855
Somatostatin, for gastroduodenal fistulas, 1140
for pancreatic fistulas, 1166–1168
for small bowel fistulas, 1180
Somatostatin analogues, for gastroduodenal fistulas, 1026
for pancreatic fistulas, 1027
Sphincterotomy, endoscopic, for bile duct leaks, 506, 509
Spinal cord injury, intervertebral disc herniation with facet dislocation complicating, 919–920
Spindle cell nevi of Reed, pathology of, 1227
Spitz nevi, pathology of, 1226–1227
Splenectomy, laparoscopic, **459–468**
indications for, 460
technique for, 460–462
vs. open splenectomy, 462, 465–467
with distal laparoscopic pancreatectomy, 541–543
Splenic salvage, with distal laparoscopic pancreatectomy, 543–544
Stab wounds, of neck, vs. gunshot wounds, 663, 665
Stereotactic radiosurgery, for malignant melanoma, **1399–1411**
clinical results of, 1404–1407
local-regional control, 1406–1407
patient and lesion characteristics, 1404–1405
prognostic variables, 1406
survival, 1405
treatment characteristics, 1405
complications of, 1407
vs. radiation therapy, 1402–1404
Stereotactically directed core needle biopsies, of atypical hyperplasia, in breast cancer, 226–227
Steroid hormone receptors, and chemotherapy, for node-negative breast cancer, 336–337
in breast cancer, in pregnancy, 271–272
Stryker pressure monitor, for severe burns, 932
Subclavian artery injuries, traumatic, 848
Subclavian vessel injuries, traumatic, 671
Subxiphoid pericardial window, to evaluate penetrating cardiac injuries, 697–699
vs. pericardiocentesis, 698
Sunlight, and risk of malignant melanoma, 1214–1216, 1287–1288
Superficial spreading melanoma, dermatologic perspective on, 1292
pathology of, 1230
Superior mesenteric circulation injuries. See *Abdominal vascular injuries.*
Superior mesenteric vein injuries. See *Abdominal vascular injuries.*
Surgical training, influence of, on surgery, **1–10**
change of venue in, 6–8
clinical training, 4–5
feasibility of proposed changes, 8
increased length of stay in, 5–6
pre-clinical education, 2–4

Tachycardia, in trauma surgery, 962
Tamoxifen, for advanced breast cancer, in elderly women, 301
for early-stage breast cancer, in elderly women, 296–297, 299–300
for localized breast cancer, in men, 352
for locally advanced noninflammatory breast cancer, 403, 404
for malignant melanoma, 1347, 1370
for metastatic breast cancer, in men, 353
for node-negative breast cancer, 329–332
for Paget's disease, of nipple-areola complex, 377–378
Therapeutic abortion, for breast cancer, in pregnancy, 273–274
Thermal therapy, for bleeding peptic ulcers, cost effectiveness of, 91–94
Thermodilution, to estimate cardiac output, in shock, 991
Thoracic duct injuries, traumatic, 679
Thoracic fistulas, etiology of, 1022
Thoracic injuries, complex. See *Complex thoracic injuries.*
with severe burns, 936
Thoracic outlet injuries, penetrating, 754–756
Thoracic vascular injuries, penetrating. See *Penetrating thoracic vascular injuries.*
Thoracoscopy, for retained hemothorax, after complex thoracic injuries, 744

Thoracotomy, emergency department, for penetrating cardiac injuries, 702–707, 716–719
for penetrating cardiac injuries, 708
for traumatic thoracic injuries. See *Complex thoracic injuries.*
in trauma care, cost effectiveness of, 53–54
Three-in-one concept, of total parenteral nutrition, for gastrointestinal fistulas, 1060
Tibial artery injuries, traumatic, 852
Tibial plateau fractures, traumatic, 894–898
radiologic evaluation of, 896
Tissue extraction, in difficult laparoscopic surgery, 611
Tissue grafts, for severe open fractures, 891–892
Tissue perfusion, in trauma surgery, 960
TNM staging system, of breast cancer, 348–349, 393–394
Total abdominal vagotomy, for peptic ulcer disease, 517–518
Total parenteral nutrition. See *Nutritional support.*
Toupet fundoplication, for gastroesophageal reflux, 445–446
with laparoscopic cardiomyotomy, for achalasia, 453–454
TP53 gene, in inherited breast cancer, predictive testing for, 215–216
Trace element requirements, in nutritional support, for gastrointestinal fistulas, 1054
Tracheal injuries, traumatic, 677
with penetrating thoracic vascular injuries, 756–757
Tracheal suctioning, after thoracotomy, for complex thoracic injuries, 742
Tracheobronchial injuries, traumatic, 727–728
Tracheoesophageal injuries, traumatic, 679
Tracheostomy, to establish airway, in severe burns, 927, 948
Transcerebral missile injuries, coagulopathy complicating, 920
Transcervical gunshot wounds, of neck, 665–666
Transcranial Doppler ultrasonography, of complex neurologic injuries, 913
Transcutaneous measurement, of oxygen tensions, in shock, 990
Transgastric jejunal tube, for intra-abdominal sepsis, with gastrointestinal fistulas, 1120
Translaryngeal tube, in trauma surgery, 973
Transudation, of clotting factors, in severe burns, 942
Transversus abdominis myocutaneous flaps. See *Breast reconstruction.*
Trauma, laparoscopic surgery for, **547–556**
complications of, 553
diagnostic studies in, 548, 549–552
blunt trauma, 549–551
penetrating trauma, 551–552
historical aspects of, 547–549
limitations of, 554
technique for, 552–553
therapeutic, 553
Trauma care, cost effectiveness of, **47–62**
administrative factors in, 48–51
diagnostic testing in, 51–53
injury prevention in, 55–58
therapeutic interventions in, 53–55
Trauma surgery, assessing tissue perfusion in, 960
end point of oxygen therapy in, 965–968
enhancing oxygen delivery in, 965
for abdominal compartment syndrome. See *Abdominal compartment syndrome.*
for abdominal vascular injuries. See *Abdominal vascular injuries.*
for complex duodenal injuries. See *Complex duodenal injuries.*
for complex hepatic injuries. See *Complex hepatic injuries.*
for complex neurologic injuries. See *Complex neurologic injuries.*
for complex orthopedic injuries. See *Complex orthopedic injuries.*
for complex pancreatic injuries. See *Complex pancreatic injuries.*
for complex thoracic injuries. See *Complex thoracic injuries.*
for complex urologic injuries. See *Complex urologic injuries.*
for difficult peripheral vascular injuries. See *Difficult peripheral vascular injuries.*
for penetrating cardiac injuries. See *Penetrating cardiac injuries.*
for penetrating neck trauma. See *Penetrating neck trauma.*
for penetrating thoracic vascular injuries. See *Penetrating thoracic vascular injuries.*
for severe burns. See *Severe burns.*
hypoperfusion in, signs of, 960–962
oxygen transport parameters in. See *Oxygen transport parameters.*
pulmonary management in. See *Pulmonary management.*
renal dysfunction in. See *Renal dysfunction.*
shock as factor in. See *Shock.*
Tube decompression, for complex duodenal injuries, 803
Tumor suppressor genes, in inherited breast cancer, 206
Two-dimensional echocardiography, in penetrating cardiac injuries, 699–702

Ulcer, peptic, bleeding in. See *Peptic ulcer bleeding.*
Ulnar artery injuries, traumatic, 849
Ultrasonography, cost effectiveness of, for bleeding peptic ulcers, 94
in trauma care, 52
in laparoscopic surgery, for trauma, 548–552
of complex hepatic injuries, 765
of severe burns, 937
transcranial Doppler, of complex neurologic injuries, 913
Ultraviolet radiation, and malignant melanoma, 1214–1216, 1287–1288
Upper gastrointestinal bleeding, control of, EndoLap in, 598
Ureteral injuries, traumatic, 871–872
Urethral disruption, with pelvic fractures, 874–876
Urinalysis, preoperative, cost effectiveness of, 18–19
Urinary tract injuries, and oliguria, 978
Urologic injuries, complex. See *Complex urologic injuries.*
Uterine abnormalities, mimicking appendicitis, laparoscopic surgery for, 475, 477
Uveal melanoma, radiation therapy for, 1387

Vaccines, for malignant melanoma, 1360–1361
Vagotomy, laparoscopic, for peptic ulcer disease, **515–522**
effect on stomach, 516
proximal gastric vagotomy, 518–519, 520
total abdominal vagotomy, 517–518
types of, 516
Vascular injuries, abdominal. See *Abdominal vascular injuries.*
complicating peripheral nerve transection, 919
difficult peripheral. See *Difficult peripheral vascular injuries.*
neurologic, traumatic, 906
penetrating thoracic. See *Penetrating thoracic vascular injuries.*
with severe burns, 938
Vascular ligation/resection, for complex hepatic injuries, 776–777
Vena cava injuries. See *Abdominal vascular injuries.*
Venous access, in nutritional support, for gastrointestinal fistulas. See *Nutritional support.*
in severe burns, 930
Venous bleeding, in pelvic ring disruption, 895–896
Venous injuries, traumatic, 854
Ventilation, mechanical. See *Mechanical ventilation.*
Ventricular injuries, traumatic, 710
Vertebral artery injuries, traumatic, 671–674
Vinca alkaloids, for malignant melanoma, 1345
Vitamin requirements, in nutritional support, for gastrointestinal fistulas, 1054
Volume status, in gastroduodenal fistulas, 1025
Volutrauma, in trauma surgery, 972–973

Water requirements, in nutritional support, for gastrointestinal fistulas, 1051
Wound care, in sepsis, with gastrointestinal fistulas, 1117–1119

Xeroderma pigmentosum, and risk of skin cancer, 1288

Young women, breast cancer in, **279–287**
breast physiology in, vs. older women, 280
diagnosis of, delay in, 280
familial vs. hereditary, 280–281
incidence of, 279–280
local control of, failure of, 282
pathology of, 281
pregnancy after, 283–284
prognostic factors in, 281–282
psychosocial impact of, 284
risk factors for, 280
treatment of, 283